

L 19352-66 EWT(m)/ETC(f)/EWG(m)/EWP(t) IJP(c) DS/JD/JG/GS/RM

ACCESSION NR: AT5013655

UR/0000/65/000/000/0180/0181
543.53 + 66.074.7:546.284

AUTHOR: Kalinin, A. I.; Kuznetsov, R. A.; Moiseyev, V. V.; Sokolova, M. N. ¹⁹ _{B+1}

TITLE: Radioactivation analysis of silicon dioxide by means of ion-exchange chromatography. ¹⁵⁵ Part 5. Separation and determination of alkaline earth metals ₂₇

SOURCE: AN SSSR. Otdeleniye obshchey i tekhnicheskoy khimii. Radiokhimicheskiye metody opredeleniya mikroelementov (Radiochemical methods for determining trace elements); sbornik statey. Moscow, Izd-vo Nauka, 1965, 180-181

TOPIC TAGS: column chromatography, cation exchange resin, alkaline earth metal, radioactivation analysis, neutron bombardment, silica analysis, calcium separation, strontium separation, barium separation

ABSTRACT: A chromatographic method was used to separate calcium, strontium, and barium isolated from samples of silica bombarded with neutrons. The procedure involved the successive elution of the elements adsorbed on a KU-2 cation exchanger (in the NH_4^+ form) with solutions of trilon B of various pH values. The elution curves are shown in Fig. 1 of the Enclosure. The degree of separation was checked on artificial mixtures containing radioactive tracers. A practically complete separation of Ca, Sr, and Ba and

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their separation from a large amount of sodium was achieved. The sensitivity of the radio-activation determination of Ca, Sr, and Ba (involving the use of an end-window counter) is: 10^{-7} g for Ca, 9×10^{-8} g for Sr, and 2×10^{-8} for Ba (the samples had been subjected to a flux of 10^{14} neutrons/cm².sec for 24 hrs.). Although this sensitivity is not very high, the determination has important practical applications. Orig. art. has: 1 figure and 1 table.

ASSOCIATION: None

SUBMITTED: 07Apr64

ENCL: 01

SUB CODE: IC, GL

NO REF SOV: 003

OTHER: 004

Card 2/3

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ENCL: 01

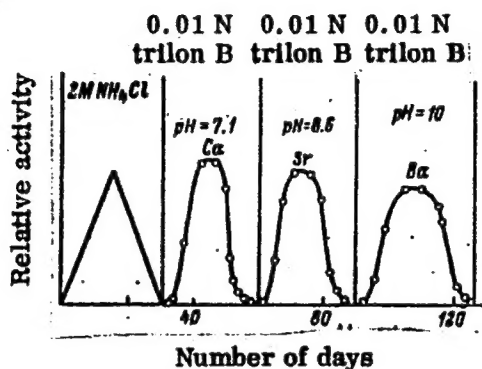


Fig. 1. - Separation of calcium, strontium, and barium on KU-2x15 cation exchange resin in NH₄⁺ form (column diameter 2 mm, height of resin layer 100 mm).

Card 3/3 (u)

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSAL AND PROPERTIES INDEX																			
<div style="display: flex; justify-content: space-between;"> <div> <p>SOKOLOVA, M. N.</p> <p>Influence of the multivalent cations Th^{4+} and Fe^{3+} on the dispersoidal-chemical properties</p> <p>BC</p> </div> <div> <p>a-1</p> <p>of Sokolova, I. I.; Smukov and M. N. Sokolova (J. Russ. Phys. Chem. Soc., 1966, 61, 1091-1096). The adsorption of thorium nitrate on kaolin rises to a maximum value with increasing concentration of salt, after which the curve proceeds horizontally in the case of Glushkov kaolin, and declines slightly in the case of Glushovskaya kaolin. The latter phenomenon is characterized both kaolins for solutions of thorium nitrate. This distinction in adsorption is due to the difference in the amount of adsorbed cations. Adsorption is almost diminished by the addition of ferric chloride to the respective solutions of thorium nitrate or ferric chloride. The reversal of the sign of the change of suspensions of kaolin to which increasing concentrations of the above salts are added is observed in electrokinetic at lower concentrations than in cataphoresis experiments; concentration of thorium nitrate and of ferric chloride insignificantly the same effect. Kaolin suspensions are most stable, and can be stored most rapidly at their isoelectric point; further addition of ferric chloride after this point has been obtained increases the stability of such suspensions.</p> <p>B. Thompson</p> </div> </div>																			
<div style="display: flex; justify-content: space-between;"> <div> <p>ASR-51A METALLURGICAL LITERATURE CLASSIFICATION</p> <p>FROM SYNDICATE</p> <p>107000 01</p> </div> <div> <p>FROM BOWEN</p> <p>011101 011 011 111</p> </div> </div>																			

SOKOLOVA, M.N

The effect of the hydrogen-ion concentration in the adsorption of ions of barium, aluminum and thorium by clays. N. A. HIELD AND M. N. SOKOLOVA. *J. Russ. Phys.-Chem. Soc.* 62, 1571-5 (1930).—Glukhov kaolin adsorbs Ba-ion from solns. of Ba(OH)₂ to a much larger extent than OH-ion; Ca-ion enters the soln. instead of Ba; therefore this is a case of substitutive adsorption. This satisfies Freundlich's equation $x/m = \alpha c^n$. Comparison of adsorption of Ba from solns. of Ba(OH)₂, BaCl₂ and BaCl₂ + HCl showed a decrease of adsorbable Ba with increase of H-ion concn. In agreement with this, Th ion is adsorbed less than Al ion and less than Ba ion, from solns. of equal concn. as its hydrolysis results in a higher concn. of H ions. I. G. TOLPIN.

L. G. TOLPIN

AS 514 METALLURGICAL LITERATURE CLASSIFICATION

PROCESSING AND PROPERTIES INDEX																									
COMMON ANALYTICAL INDEX													COMMON ANALYTICAL INDEX												
<p>Investigation of the chemical composition and structure of neutral components of natural bitumens. M. N. Sokolova. <i>Izvestiya Inst. Goryuchikh Iskopayemykh</i>, Ser. A, No. 1, No. 1, 43 (1940); <i>Khim. Referat Zhur</i> 1940, No. 7, 17. The active H was determined in the single components of bitumens from various petroleum-producing regions of the Azerbaijan S. S. R. The oil components contained no active H. In tars its content varied between 0.1087 and 0.1314% and in asphaltenes between 0.0502 and 0.0805%. The av. content of the sum of O, S and N in the tars was 10.23%. If active H is bound completely to one of these elements the following av. values for each of them in the active groups were: S 3.94, O 0.197 and N 1.72%. The corresponding values for asphaltenes were: S 2.31, O 1.18 and N 1.04%. W. R. Henn</p>																									
<p>ASME-A Metallurgical Literature Classification</p>																									

SOKOLOVA, M.N., and GMID, I.P.

"Petrographic-Mineralogical Studies of the Devonian Deposits in the Molotov,
Kizelovsko-Kos'vin and Chusov Regions"
From book, Works of the Petroleum Institute, vol. 1, n°11, Academy of Sciences USSR,
1949

SOKOLOVA, M. N.

Investigation of the chemical composition and structure of neutral components of natural bitumens. Acetyl-replaceable hydrogen. M. N. Sokolova. *Trudy Inst. Nefti, Akad. Nauk S.S.S.R.* 1, No. 2, 277-84 (1950); cf. C.A. 36, 5995d.

Hydrogens capable of being replaced by Ac were detd. by refluxing 0.1 to 0.2 g. of material with 2 ml. of Ac₂O-pyridine mixt. for 1 hr. and titrating the excess reagent with 0.1N NaOH with a potentiometric end point. Check runs with primary and secondary alic. and amines showed only one replaceable H in each case. Tertiary alic. and amines did not react. Oils from bitumens of the S. W. Shubana mines showed 0% replaceable H which agrees with total active H by the Tserevitinov method. Pitches from this and other regions yielded an almost const. replaceable H value of 0.07% which is 0.05% lower than the total active H. Evidence is presented that this difference is due to -SH which is not detd. by the Ac₂O method. Asphaltenes gave values ranging from 0.03 to 0.26%. Ac-replaceable H values of various pitches and asphaltenes are compared in terms of acetyl nos. (mg. KOH equiv. to HOAc combined with 1 g. material). The characteristic Ac nos. for pitches were rather large and ranged from 36.1 to 40.7; for asphaltenes they ranged from 18.6 to 141.4. Total active H by the Tserevitinov method increased in the order, oils < asphaltenes < pitches, whereas the Ac-replaceable H value was usually larger for asphaltenes than for pitches. Calculations showed that from 16.8 to 35.52% of the total O, N, and S is bound in an active group; for asphaltenes, 7.3 to 16.1%. Furthermore, pitches contain about 1.7% SH which corresponds to 16.6% of the total S + O.

John A. Krynetsky

Chemical Abst.

Vol. 48 No. 6

Mar. 25, 1954

Petroleum, Lubricants, and Asphalt

SOKOLOVA, M. N.

Chemical Abst.
Vol. 48
Apr. 10, 1954
Fuels and Carbonization Products

Investigation of the chemical composition and structure of neutral components of natural bitumens. Aldehyde groups. M. N. Sokolova. *Trudy Vses. Nauch. Akad. Nauk S.S.S.R.* 1: No. 8, 285-94 (1950).—Alc. solns. of aldehydes contg. 0.02% pyrrole and approx. 6% HCl on standing develop characteristic absorption bands in the visible yellow region which are detd. spectroscopically. The developing time ranges from 8 min. to 48 hrs. depending on the concn. and species of aldehyde. Sensitivity of the test varies from 0.0002% for cinnamaldehyde and furfural to 0.002% for glucose and vanillin. The width and (or) intensity of the absorption bands varies with the aldehyde species, concn., acid concn., development time, and the length through which the soln. is examined. Solns. of formaldehyde and valeraldehyde do not give bands but absorption throughout the studied spectrum. These on standing ppt. a violet-red condensation product with lightening of the solns. Long standing of solns. contg. other aldehydes also may cause pptn. Easily alc.-sol. alcs., phenols, and ketones do not interfere. Nine samples of bitumens taken from various regions were all shown to contain aldehyde groups by comparing the spectrograms of their alc. extracts, both before and after the pyrrole-HCl addn. John A. Krynsky

916 JF

SOKOLOVA, M.N.

"A contribution to the study of the chemical composition and structure of the neutral components of natural bitumens" (two articles), Tr. In-ta nefti, Vol. 1, Section 2, 1951.

S. KOLVA, M. N.

4

✓ Ozokerite bitumens in the Minusinsk basin. M. N. Sokolova, S. I. Miroshov, and L. M. Nikitina. *Doklady Akad. Nauk S.S.S.R.* 102, 1181-3 (1955); cf. Rusanov, *et al.*, *C.A.* 31, 8222i. - Samples of bitumen taken at distant points in the Minusinsk basin were sepd. into fractions: "light hydrocarbons" (I) with uniform properties (d_4^{20} 0.8058-0.7913, n_D^{20} 1.4499-1.4410, m . 43.5-48 and 53.5-69, and av. mol. wt. 392); "dark hydrocarbons" (II); and tars (III) sol. in 2% NaOH. The components of II and III vary from pure hydrocarbons to humic substances; the C/H ratio decreases and O and N increase. With some of the components C/O = 1 and C/N = 2. Sapon. of I yields 25.5% of H₂O-insol. fatty and oxy acids; 68.3% remains unreacted. Sapon. of II results at first in an increase of fatty acids, depending on the hydrocarbon content, up to 61.7 and 69.5%, and then a decrease to 25.3% whereas the proportion of unsaponifiables decreases continuously 68.3 → 13.27 → 3.27 → 1.7% and the H₂S-sol. increases; NH₃ is evolved. Heating II with HCl (d. 1.06) results in furfural which with AcOH forms colored substances with an absorption band (iso-AmOH solns.) at 527-550.4 mμ. Spectroscopic examn. of III indicates the presence of simple pyrrole compds. Dry samples on aging in the lab. lost 4.2% of the hydrocarbons after 12 years; moist samples lost 17% after 2 years; the proportion of II and III increased simultaneously. The excessive increase of N (4.25%) cannot be accounted for by atm. N and suggests the presence of an internal source of N. It appears that the formation of bitumen in this basin is of recent origin. *I. Bencowitz*

CP

18

2

SOKOLOVA, M. N.

3

The "mineral oil" in Tuva. S. I. Mironov and M. N. Sokolova. *Trudy Inst. Nefti, Akad. Nauk S.S.S.R.* 6, 8-7 (1956). The bitumens from the oil deposits in Tuva (along the upper reaches of the Enisei River, Siberia) are nonuniform in compn. A brown resinous deposit (readily sol. in alkali soln.) is pptd. on cooling the C_6H_6 -alc. ext. of the oil, and after evapn. of the solvent and drying two layers are formed; the upper one consists of a light-yellow paraffin wax similar to bees wax in appearance and with a pleasant honey-like aroma, and a bottom layer which is brown and viscous, and has a bad odor. The "mineral oil" is similar to ozokerite in the Minusinsk Basin, and this may be an indication for the existence of oil deposits in the region. The deposit was most likely formed in the Silurian or in the more recent Paleozoic eras, but not in eras more recent than the middle Carboniferous. W. M. Sternberg.

W.M. Sternberg

1456. FINDINGS OF OZOKERITES IN THE MIRNINSK SYNCLINE. Sokolova, N.N.
and Mironov, S.I. (Trud. Inst. Khim. (Trans. Inst. Petrol., Acad. Sci.
U.S.S.R.), 1956, vol. 8, 8-20). Data on these bituminous substances show them
to be different products from the conversion of the same paraffinous hydrocarbon
(L).

4/2
aag

3

SOKOLOVA, M. N.

Potential hydrocarbon recovery from argillaceous rocks by
extraction with compressed gases. M. N. Sokolova, M. A.
Kapelyushnikov, and S. L. Zaks. *Proc. Acad. Sci.
U.S.S.R., Sect. Chem. Technol.* 108, 67-70(1958)(English
translation).—*See C.A.* 51, 3120d. B. M. R.

SOKOLOVA, M.N.; KAPELYUSHNIKOV, M.A.; ZAKS, S.L.

Possibilities of hydrocarbon recovery from clay rocks by solution in compressed gases. Dokl.AN SSSR 108 no.4:687-690 Je '56. (MIRA 9:9)

1.Chlen-korrespondent AN SSSR (for Kapelyushnikov).2.Institut nefiti Akademii nauk SSSR.

(Petroleum research)

PHASE I BOOK EXPLOITATION

1022

Putsillo, Vera Geogriyevna, Sokolova, Mariya Nikolayevna, Mironov,
Stepan Il'ich

Nefti i bitumy Sibiri (Oils and Bitumens of Siberia) Moscow, Izd-vo
AN SSSR, 1958. 245 p. 2,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut nefti

Resp. Ed.: Mironov, S. I., Academician; Ed. of Publishing House:
Shobolov, S. P.; Tech. Ed.: Kashina, P. S.

PURPOSE: This book is for geologists and oil exploration specialists.

COVERAGE: The present monograph, a collection of 8 articles by three
authors, describes the occurrence, chemical composition, and genesis
of the bitumens and oils of Siberia. The material is restricted to

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Oils and Bitumens of Siberia 1022

Rocks of Lake Baykal	7
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SHLYUKOVA, Z.V.; SOKOLOVA, M.N.; YAKOVLEVSKAYA, T.A.; RUDNITSKAYA, Ye.S.;
BUKOVA, T.A.

Labuntsovite from the Khibiny Mountains. Zap. Vses. min.
ob-va. 94 no.4:430-436 '65. (MIRA 18:9)

1. Institut geologii rudnykh mestorozhdeniy, petrografii,
mineralogii i geokhimii AN SSSR, Moskva.

AUTHOR: Sokolova, M.N. 131-3-11/16

TITLE: A Simplified Method of Determining the Alkali Content in Silicates (Uproshchennyy metod opredeleniya sodержaniya shchelochey v silikatakh)

PERIODICAL: Ogneupory, 1958, Vol 23, Nr 3, pp 139-141 (USSR)

ABSTRACT: The method recommended consists: 1.) In the decomposition of a unit of weight of silicate by hydrofluoric acid and sulphuric acid, and the removal of the acid by evaporation. 2.) In dissolving the remaining salt and, in the hydrolytical cases of hydroxides and basic salts of tri- and tetravalent metals, by means of magnesium oxide. 3.) In the determination in aliquot filtrate portions of potassium in form of its dipicrylamine and of sodium in form of sodium-zinc-uranyl acetate. When determining potassium in silicates its precipitation conditions in solutions containing sodium are unclear. By a series of experiments it is shown (table 1) that potassium can be precipitated completely if there is a surplus of sediments. Table 2 shows the results obtained by the determination of potassium in the presence of sodium. The authoress further

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A Simplified Method of Determining the Alkali Content
in Silicates

131-3-11/16

describes the method of the analysis. Table 3 compares the results obtained when determining alkalis according to the classical and to the method recommended here. As may be seen herefrom good agreement was attained in practice. Carrying out the analysis according to the method recommended takes about 1 1/2 working days. There are 3 tables and 11 references, 8 of which are Slavic.

ASSOCIATION: Institute for the Chemistry of Silicates AS USSR (Institut khimii silikatov AN SSSR)

AVAILABLE: Library of Congress

Card 2/2 1. Alkalis-Determination 2. Silicates-Decomposition

SOKOLOVA, M.N., inzh.

Conference on the use of heat-resistant steels in power
machinery manufacture. Energomashinostroenie 6 no.7:34
J1 '60. (MIRA 13:7)
(Power engineering--Equipment and supplies) (Steel)

18.1110

20502

S/096/61/000/005/001/003

E111/E552

AUTHORS: Liberman, L. Ya., Candidate of Technical Sciences and
Sokolova, M. N., Engineer

TITLE: Heat Resisting Steel for Fastenings in Power Installations

PERIODICAL: Teploenergetika, 1961, No.4, pp.28-34

TEXT: The authors give results of their investigation aimed at finding steels for use as bolts, pins etc. in installations working with steam at 580°C and 240 atm. The properties required are superior to those of type EI-909 (20Kh1M1F1) (EI-909 (20Kh1M1F1)) similar to the British steel Durehete 950. The chemical composition of the steels studied and dilatometrically determined critical points are shown in Table 1 (the first column shows the type of steel, X = Kh, M = M, F = F, B = B, B = V, T = T, P = R; the second the heat number and weight in kg; first line gives the permitted range of composition of 20Kh1M1F1 steel). Six of the heats were melted in a 100 kg induction furnace and forged into 70 x 40 mm or 70 mm diameter blanks; and two in a 500 kg arc furnace and forged to 70 mm diameter blanks. Blanks were annealed at 950°C for two hours

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and cooled to 300°C in the furnace. Most heats correspond to the V/C = 4 value shown to be desirable (Ref.2). Steel 20Kh1M1F1 was taken as the basis, and alloyed as required. A study of the effect of hardening from 950-1050°C and tempering at 650-720°C showed that the properties of all the steels were similar and little affected by differences in heat treatment. The carbide electrolytically separated from the steels heat treated in various ways was weighed and analysed. For the basic steel the amount was little dependent on hardening temperature. With hardening from 950°C the precipitate contained about 0.4% V; with higher hardening temperature the V content was 0.05-0.09. Tempering always led to increase in the amount of precipitate and its iron content while the vanadium content corresponds roughly to the hardened-from-950°C state. X-ray analysis in the refined state shows the carbide phase to be VC with Mo and Fe present. For 20X1M1Φ1B (20Kh1M1F1B) steel in the refined state the amount of iron content of the deposit was greater and the carbide phase was NbC and VC (V content low). With 20X1M1Φ1TP (20Kh1M1F1TR) steel in the refined state the amount of precipitate is about the same as in the basic steel and the V content is that of the steel itself. With the basic steel double

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hardening followed by tempering gives a uniform fine structure. Type 20Kh1M1F1B contains irregularly distributed ferrite and undissolved-carbide regions; the third steel differs from the others in having a larger grain of unequal etchability, bainite structure and the presence of primary titanium carbides and carbonitrides. The authors concluded from these and other experiments that for their steels oil hardening from 980 or 1000°C and tempering at 700°C to get the required mechanical properties is sound, and used 5-7 hours tempering (yield-point strength 75-80 kg/mm²). All the steels had very similar mechanical and plastic properties at 20-600°C, but 20Kh1M1F1TR steel had considerably higher toughness (16-20 kg.m/cm²) than the others (8-15). Tensile tests with various rates of deformation showed that hardening from 980°C gives the best plasticity for 20Kh1M1F1 and 20Kh1M1F1TR steels. No tendency to temper brittleness was found in any of the steels. The properties of all steels remained satisfactory on prolonged heating for 3000-5000 hours, at 565°C and no important structural changes occurred. Coefficients of linear expansion for 20Kh1M1F1TR and 20Kh1M1F1 steels were measured for various ranges, overall values (20-600°C) being 13.55 and 13.8 (presumably x10⁻⁶ - abstractor), respectively.

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X

Heat Resisting Steel for ...

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Relaxation properties at 565 and 580°C were studied using the ring-test method of I. A. Odling (not described) and tensile testing cylindrical specimens on УИМ-5 (UIM-5) machines. Some differences in results obtained by the two methods were found. Both 20Kh1M1F1 and 20Kh1M1F1TR showed improvement at 565°C with increasing hardening temperature and were better than the other steels; the latter at 580°C has specially high relaxation stability (residual stresses after 10 000 hours are not less than 11 kg/mm²). Fig.4 shows the ratio of residual stress to initial (the "relative relaxation stability") as functions of V:C ratio for 20Kh1M1F1 steel for various test durations (curves 1-5 correspond to 1000-10000 hours) at 565°C (oil hardening from 1050, tempering at 700°C). Creep tests at 560°C and 12 kg/mm² showed 20Kh1M1F1TR steel to be best (11-12 kg/mm² for a creep rate of 10⁻⁵ %/hour); creep for 2000-3000 hours had no appreciable effect on mechanical properties or toughness. Determinations of the long-time strength at 565°C of the steels (of smooth and notched specimens) showed that 20Kh1M1F1TR steel is better than the type 30X123 (EI723) and 30X15 (EI415) pearlitic steels commonly used for fastenings. This is attributed

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Heat Resisting Steel for ...

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to the joint presence of titanium and boron. The authors conclude that 20Kh1M1F1TR steel can be used for fastenings (bolts, pins etc.) for prolonged service at metal working temperatures of 565-580°C, and also at lower temperatures when high relaxation stability is needed; the heat-resisting and relaxation properties of 20Kh1M1F1 steel satisfy its use for fastenings at temperatures up to 565-580°C. There are 6 figures, 7 tables and 4 references: 3 Soviet and 1 non-Soviet.

(Ref.2: Eng. No.4690, 824, 180, 1955).

ASSOCIATION: Tsentral'nyy kotloturbinnyy institut
(Central Boiler and Turbine Institute)

Card 5/6

20513

S/114/61/000/005/001/003
E073/E535

18 1110

AUTHOR: Sokolova, M. N., Engineer
TITLE: Refractory Steel for Fastening Parts of Power Generation
Equipment with Steam Temperatures of 565 and 580°C

PERIODICAL: Energomashinostroyeniye, 1961, No.5, p.6

TEXT: TsKTI developed a pearlitic steel 20X1M1ΦITP (ЭП182) (20Kh1M1Φ1TR, EP182) for fastening parts in turbines and for fittings in steam generation equipment with steam temperatures of 565 and 580°C. The composition of this steel is as follows: 0.17-0.24% C; ≤ 0.35% Si; ≤ 0.50% Mn; 0.9-1.4% Cr; 0.8-1.1% Mo; 0.7-1.1% V; ≤ 0.5% Ni; 0.05-0.12% Ti; approx. 0.005% B. The properties of this steel were studied on industrial heats. After heat treatment consisting of quenching from 980 to 1000°C in oil and tempering at 700°C for 5-6 hours, this steel has the following properties: $\sigma_{0.2} = 75 \text{ kg/mm}^2$; $\sigma_B = 85-90 \text{ kg/mm}^2$; $\delta = 15\%$; $\psi = 65\%$; $a_k = 13-20 \text{ kgm/cm}^2$; $H_B = 269-255$. The modulus of elasticity: 2.15×10^4 at 20°C, 1.75×10^4 at 565°C and 1.73×10^4 at 580°C. The coefficient of linear expansion:

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Refractory Steel for Fastening ... S/114/61/000/005/001/003
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13.0×10^{-6} at 20 to 500°C, 13.5×10^{-6} at 20 to 550°C, 13.55×10^{-6} at 20 to 600°C. The steel has an adequate stability of the mechanical properties. After holding at 565°C for 3000 to 5000 hours, the mechanical properties of this steel did not deteriorate. It was established by two methods (bending of ring-shaped specimens and extension of cylindrical specimens) that this steel has a high relaxation stability. At 565°C and an initial stress of 30 kg/mm² the residual stress after 10 000 hours in tests with the ring method was 11.5 kg/mm² and in tensile tests₂ it was 15 kg/mm². At 580°C and an initial stress of 25 kg/mm² the residual stress after 10 000 hours was 10.0 kg/mm². The long run strength at 565°C after 10 000 and 100 000 hours were respectively 30 and 25 kg/mm². In tests lasting 6500 hours this steel proved insensitive to notches. The creep limit at 565°C equalled 12 kg/mm². This new steel is superior to the steels 20XIM1Φ1 (20Kh1M1F1), 3H723 (EI723) and 3H415 (EI415), which are at present in use. The steel will be manufactured by the Elektrostal' Works.

[Abstractor's Note: This is virtually a complete translation.]

Card 2/2

LIBERMAN, L.Ya., kand.tekhn.nauk; SOKOLOVA, M.N., inzh.

Heat-resistant steel for fastening components in electric power
systems. Teploenergetika 8 no.5:28-34 My '61. (MIRA 14:8)

1. TSentral'nyy kotloturbinnyy institut.
(Turbines) (Heat-resistant alloys)

SOKOLOVA M.N.

GTRSP L Vol. 5-No. 1 Jan. 1952

Sokolov, M.N. The dependence of the density of the population and the form of the shell
Balanus balanoides on living conditions, 1227-30

Akademiya Nauk, S.S.S R., Doklady Vol. 78, No. 6 1951

SURIGONA, . Y.

"Nutrition and Nutritive Grouping of the Deep-water Benthos of the Eastern Seas." Card Biol Sci, Inst of Oceanology, Acad Sci USSR, 30 Dec 54.
(VM, 22 Dec 54)

Survey of Scientific and Technical Dissertations Defended at USSR
Higher Educational Institutions (12)
SC: Sum. No. 556, 24 Jun 55

SOKOLOVA, M.N.

Distribution regularities of deep sea benthos. The influence of the macrorelief and distribution of suspension upon the edaphic groups of bottom invertebrates. Dokl. AN SSSR 110 no.4:692-695 0 '56.
(MIRA 10:1)

1. Predstavleno akademikom Ye.N. Pavlovskim.
(Marine fauna) (Pacific Ocean-- Invertebrates)

SOKOLOVA, M.N.

~~Nutrition of deep water benthos. Nutrition of Laetmatonice~~
producta v. wyvillei McIntosh. Dokl. AN SSSR 110 no.6:1111-
1114 0 '56. (MLRA 10:2)

1. Predstavleno akademikom Ye.N. Pavlovskim.
(Marine biology)

SOKOLOVA, M.N.

Feeding of some carnivorous benthonic deep-sea invertebrates of
the Far Eastern seas and the northwestern part of the Pacific
Ocean. Trudy Inst. okean. 20:279-301 '57. (MIRA 10:12)
(Soviet Far East--Marine fauna)

SOKOLOVA, M.N.

Food of some species of Far Eastern Grangonidae. Trudy Inst. okean.
23:269-285 '57. (MIRA 11:3)

(Soviet Far East--Decapoda)

SOKOLOVA, M.N.

Nourishment of deep-sea bottom detritus-consuming invertebrates.

Trudy Inst. okean. 27:122-153 '58.

(MIRA 11:4)

(Marine fauna)

ARBUZA, M. I.

"Some Specificities of Deep-Sea Bottom Fauna Ecology".
report to be submitted for the Intl. Oceanographic Cong. New York City,
31 Aug - 11 Sep 1959.

(Inst. of Oceanology, Moscow)

SOKOLOVA, M.N.

Ecological characteristics of deep-water bottom invertebrates.
Itogi nauki: Dost.ocean. no.1:188-203 '59. (MIRA 12:10)
(Invertebrates)

SOKOLOVA, M.N.

Distribution of groups (biocoenoses) of benthonic fauna in oceanic
trenches of the northwestern Pacific. Trudy Inst. okean. 34:21-59
'60. (MIRA 13:10)

(Pacific Ocean--Benthos)

SOKOLOVA, M.N.

Some characteristics of the distribution of benthonic biocoenoses
on the sea floor of the northwestern part of the Pacific Ocean.

Trudy Inst. okean. 34:336-342 '60.

(MIRA 13:10)

(Pacific Ocean--Benthos)

SOKOLOVA, M.N.; KUZNETSOV, A.P.

Nature of feeding and role of the tropic factor in the distribution of the sand dollar *Echinarachnius parma* Lam. Zool. zhur. 39 no.8: 1253-1256 Ag '60. (MIRA 13:8)

1. Institute of Oceanology, U.S.S.R. Academy of Sciences, Moscow.
(Soviet Far East--Sea urchins)

BELYAYEV, G.M.; SOKOLOVA, M.N.

Investigating the bottom fauna of the Marianas Trench. Trudy Inst.
ocean. 41:123-127 '60. (MIRA 13:9)
(Marianas Trench--Benthos)

BIRSHTEYN, Ya.A.; SOKOLOVA, M.N.

Bottom fauna of the Bougainville depression. Trudy Inst. okean.
41:128-131 '60. (MIRA 13:9)
(Bougainville Island region--Benthos)

KOSYGIN, A. A., Marine Hydrophysics Institute, Academy of Sciences USSR.
 Investigation into alkalization of waters of organic substances of dead
 plankton under anoxic conditions. (Section VII.C.1)
 KOTLYAR, D. A., Institute of Oceanology - "Ocean Regulation" concerning
 the general distribution of chemical characteristics in the waters of
 several parts of the Pacific. (Section VII.C.1)
 KOTLYAR, S. A., All-Union Scientific Research Institute of Marine Fishing
 and Oceanography, Pacific Fisheries Department - a new means for marine
 fishery survey. (Section VII.C.1)
 KUDRYAVTSEV, M. B., Institute of Oceanology - The distribution of deep-sea
 biocoenosis in the Pacific in connection with food conditions.
 (Section VII.C)
 KURCHIK, Yu. A., Institute of Biology of Fisheries, Academy of Sciences
 USSR - The substrate illumination and the primary production of photo-
 synthesis in the sea. (Section VII.C.1)
 KURCHIK, B. K., Institute of Biology of Fisheries, Academy of Sciences
 USSR - The problem of bringing to commercial connection in the mitsu-
 geophytic algaebank. (Section VII.A.3.2)
 KURCHIK, M. B., and SEMENOV, A. A., Institute of Oceanology - The distribu-
 tion of deep oceanic currents with the application of anchor buoys
 (method of observation). (Section VII.C.1.5)
 KURCHIK, M. B., and SEMENOV, A. A., Institute of Oceanology - "Geotrophic
 currents in the Azov-Black Sea." "Pacific" (Section VII.C)
 KURCHIK, V. I., Institute of Oceanology - New data on the techniques of
 southern Kazakhstan. (Section VII.C)
 KURCHIK, B. B., Institute of Oceanology - "The astrophysical study of the
 people of oceans in the USSR" (Section II)
 KURCHIK, G. B., Institute of Oceanology - "Features of evolution in the
 bottom topography of the Pacific Ocean." (Section VII.C.1)
 KURCHIK, V. A., Institute of Oceanology - "Greenhouse flora of the
 Pacific coast in the USSR as a basis for the subdivision of continental
 deposits of this age." (Section VII.C)
 KURCHIK, A. A., Institute of Oceanology - "Geographical distribution
 of crystal bottom forms and the problem of vertical comar-
 vation." (Section VII.C)
 KURCHIK, V. I., Moscow State University, Geographical Faculty -
 "On the nature of the bottom of the ocean in the East Asia." (Section VII.C)
 KURCHIK, G. B., Institute of Oceanology - "On the nature of the synoptic
 folded state in the western belt of the Pacific." (Section VII.C)
 KURCHIK, M. B., and SEMENOV, V. I., Institute of Oceanology -
 Legend O. N. Schmidt - "Some possibilities in interpretation of surface
 waves of the Pacific." (Section VII.C.2)
 KURCHIK, A. A., Institute of Oceanology - "The tectonic map of Bureana."
 (Section VII.C)
 KURCHIK, V. I., and SEMENOV, A. A., The Leningrad Fisheries Engineering
 Academy Level 5, B. Kover - "Open problems involved with wood studies
 in southeast Asia." (Section VII.A.7)
 KURCHIK, M. A., Physico-Geographical Institute, Moscow State
 University - The physico-geographical evolution of the Southern and
 Zairenka Islands. (Section VII.D)
 KURCHIK, M. B., Institute of Oceanology - "On the relations between
 the types of bottom and the climate of Australia, New Zealand,
 and Bureana." (Section VII.C)
 KURCHIK, L. A., and KURCHIK, S. A., Institute of Oceanology - "General
 regularities in the quantitative and multiplicity distribution of the
 bottom fauna in the Pacific." (Section VII.C)
 KURCHIK, S. V., and KURCHIK, M. A., Institute of Oceanology - "The com-
 parative study in methods of primary production investigation of fresh-water
 plankton." (Section III.C)
 KURCHIK, A. V., Institute of Oceanology - "Cytophysiological investigation
 of competitive adaptations of invertebrates in the northern area of
 the Pacific Ocean." (Section VII.C)
 KURCHIK, A. V., Institute of Oceanology - "Outlines of southern ocean
 geomorphology." (Section VII.D.1)

KUZNETSOV, A.P.; SOKOLOVA, M.N.

Nature of feeding and distribution of *Ophiopholis aculeata* (L.).
Trudy Inst.ocean. 46:98-102 '61. (MIRA 14:6)
(Kurile Islands---Ophiuroidea)

SOKOLOVA, M.N.

Trophic zonality in the distribution of benthos in the northern part of the Pacific Ocean. Vop. ekol. 5:201-203 '62. (MIRA 16:6)

1. Institut okeanologii AN SSSR, Moskva.
(Pacific Ocean--Benthos)

SOKOLOVA, M.N.; PASTERNAK, F.A.

Quantitative distribution of the bottom fauna in the northern
part of the Arabian Sea and in the Bengal Bay. Dokl. AN SSSR
144 no.3:645-648 My '62. (MIRA 15:5)

1. Institut okeanologii AN SSSR. Predstavleno akademikom N.M.
Strakhovym.

(Indian Ocean--Marine fauna)

1987.01.11, M.N.

Some regularities in the distribution of food groups of deep-sea
benthos. Okanologia 4 no.6:1079-1088 '81.

(MIRA 18:2)

1. Institut okeanologii AN SSSR.

SOKOLOVA, M.N.; PASTERNAK, F.A.

Quantitative distribution and tropical zoning of the bottom
fauna in Bay of the Bengal and the Andaman Sea. Trudy Inst.
ocean. 64:271-296 '64. (MIRA 17:7)

SOKOLOVA, M.H.

Mineralogy of the deep horizons of the Kukisvumchorr apatite deposit in the Khibiny Tundras. Dokl. AN SSSR 160 no.1:193-195
Ja '65. (MIRA 18:2)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralologii i geokhimii AN SSSR. Submitted August 12, 1964.

VARSHAVER, L.G.; SOKOLOVA, M.N.

Some clinical anatomicopathological juxtapositions in cancer
of the pancreas. Sbor.nauch.trud.Kiev.okrzh.voen.gosp. no.4:
165-170 '62. (MIRA 16:5)

(PANCREAS—CANCER)

SIMONOVICH, Ye.N.; GRUZHESKIY, V.Ye.; SOKOLOVA, M.N.

Supplementation of Fulleborn's method. Med.paraz. i paraz.bol. 25
no.3:249-251 J1-S '56. (MIRA 9:10)

(FILARIASIS, diagnosis,
Fulleborn's method, modified (Rus))

SOKOLOVA, M.N. (Kiyev)

Acute hemocytoblasto-megacaryocytic leukemia. Klin.med. 40
no.6:101-104 Je '62. (MIRA 15:9)

1. Iz kafedry patologicheskoy anatomii (zav. - zasluzhenny
deyatel' nauki prof. M.K. Dal') Kiyevskogo instituta usover-
shenstvovaniya vrachey (dir. - dotsent M.N. Umovist).
(LEUKEMIA)

VARSHAVER, L. G.; SOKOLOVA, M. N.

Transitional form of leukosis. Probl. gemat. i peral. krovi 7
no.7:49-52 J1 '62. (MIRA 15:7)

1. Iz kafedry patologicheskoy anatomii (zav. - prof. M. K. Dal')
Kiyevskogo instituta usovershenstvovaniya vrachey i prozektury
(zav. - prof. V. L. Byalik) Kiyevskogo okruzhnogo voyennogo
gospitalya.

(LEUKEMIA)

SHLEYER, M.I.; SOKOLOVA, M.V.; CHATSKIY, P.I., kand. tekhn. nauk

Use of powdered chrome tanning materials in the treatment of
hides and skins. Kozh.-obuv. prom. 7 no.1:31-33 Ja '65.
(MIRA 18:3)

AUTHORS: Rode, Ye. Ya., Sokolova, M. P. SOV/78-3-10-17/35

TITLE: Physicochemical Investigations of Phospho-12(24)-Tungstic Acid (Fiziko-khimicheskoye issledovaniye fosforno-12(24)-vol'framovoy kisloty)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol 3, Nr 10, pp 2323-2332 (USSR)

ABSTRACT: Solid heteropoly acids were investigated by physicochemical methods. Phosphotungstic acid with the following composition was synthesized: P_2O_5 - 2,09%, WO_3 - 81,77%, H_2O - 16,4%. Hydrates of constant and variable composition are formed in slow thermal dehydration at 200-250°C: 61; 51; 45; 31; 15,6-13 mol H_2O (phase of variable composition); 13 and 7,2-3 mol H_2O (phase of variable composition). The water contained in these hydrates is crystal water. It is a reversible dehydration process that does not lead to decomposition of the heteropoly acid. A molecular compound is produced on a heating up to 250-300°C. It has the following composition: $H_3[PW_{12}O_{40}]$ with 3 mols water which are very difficult to remove. This compound

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SOV/78-3-10-17/35

Physicochemical Investigations of Phospho-12(24)-Tungstic Acid

is stable within the temperature range of between 250 and 425°C. A new compound is indicated by the respective thermograms and X-ray analyses. $H_3[PW_{12}O_{40}]$ is water soluble, under the formation of the above-mentioned hydrates. When heated up to more than 425°C, the compound decomposes under a complete decomposition of the heteropoly acid. The respective thermogram indicates that an endothermal effect is produced in the decomposition, followed by an exothermal effect that indicates the crystallization of tungsten oxide. There are 7 figures, 3 tables, and 18 references, 5 of which are Soviet.

ASSOCIATION: Institut obshechey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry imeni N. S. Kurnakov of the Academy of Sciences, USSR)

SUBMITTED: May 19, 1958

Card 2/2

KUZNETSOV, M.P., red.; LABAZNOV, V.I., red.; SOKOLOVA, M.P., red.; LARIONOV,
G.Ye., tekhn. red.

[Collection of list (wholesale) and estimated prices for materials
and electric components not included in price book 8] Sbornik preisku-
rantnykh (optovykh) i smetnykh tsen na materialy i elektrokonstruktsii,
ne uchtennye tsennikom no.8. Moskva, Gos. energ. izd-vo, 1960. 254 p.
(MIRA 14:6)

1. Russia(1923- U.S.S.R.) Glavnoye upravleniye po proizvodstvu elektro-
montazhnykh rabot.

(Electric engineering—Materials)

SADCHIKOV, A.V.; SOKOLOVA, M.P., red.; VORONIN, K.P., tekhn. red.

[Guide to safety measures for an electrician-lineman in the construction of electric transmission lines in mountainous areas] Pamiatka po tekhnike bezopasnosti dlia elektromontazhnikov pri sooruzhenii linii elektropredachi v usloviakh gornykh raionov. Moskva, Gosenergoizdat, 1961. 22 p.
(MIRA 15:8)

1. Russia (1917- R.S.F.S.R.) Glavnoye upravleniye po proizvodstvu elektromontazhnykh rabot.

(Electric lines, Overhead)
(Electric engineering--Safety measures)

GLUZDOVSKIY, S.M.; SOKHRANSKIY, S.T.; GORNOVA, I.S.; MARKINA, V.A.;
KAPLAN, A.A.; NAYFEL'D, A.M.; SOKOLOVA, M.P., red.;
ZOLOTAREVA, M.A., red.; LARIONOV, G.Ye., tekhn. red.

[Technical documentation on cable jointing sleeves] Tekhnicheskaya dokumentatsiya na kabel'nye mufty. Moskva, Gosenergoizdat. No.14. [Jointing sleeves and termination of three-wire 1 kv. cables with aluminum sheathing used as common neutral wire (fourth strand)] Mufty i zadelki na trekhzhil'nykh kabeliakh s aluminievoy obolochkoi na napriazhenie 1 kv pri ispol'zovanii obolochki v kachestve nulevogo rabochego provoda (chetvertoi zhily). 1963. 55 p. (MIRA 16:9)

1. Nauchno-issledovatel'skiy institut kabel'noy promyshlennosti (for Markina). 2. Moskovskoye proyektno-eksperimental'noye otdeleniye Gosudarstvennogo proyektного instituta tyazheloy elektricheskoy promyshlennosti (for Nayfel'd).
(Electric cables)

RODE, Ye.Ya.; SOKOLOVA, M.P.

Trisubstituted sodium salt of phospho-12-tungstic acid. Zhur.
neorg. khim. 8 no.8:1883-1890 Ag '63. (MIRA 16:8)

1. Institut obshchey i neorganicheskoy khimii imeni N.S. Kurnakova
AN SSSR.

(Phosphotungstic acid) (Sodium salts)

KUZNETSOV, M.P.; SOKOLOVA, M.P., red.; BRONSHTEYN, I.I., red.

[Collection of safety engineering regulations for electric equipment installation operations] Sbornik pravil tekhniki bezopasnosti pri proizvodstve elektromontazhnykh rabot. Moskva, Energiia, 1964. 335 p. (MIRA 17:11)

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye po proizvodstvu elektromontazhnykh rabot.

ROZHDESTVENSKIY, V.V.; SOKOLOVA, M.P.; KRIKUNOVA, L.P.

Advanced training for all drillers. Razved. i okh. nedr.
30 no.11:60-61 N '64. (MIRA 18:4)

1. Tyumenskoye geologicheskoye upravleniye (for Rozhdestvenskiy).
2. Tyumenskiy gruppovoy komitet professional'nogo soyuza rabochikh geologorazvedochnykh rabot (for Sokolova).
3. Tsentral'nyy komitet professional'nogo soyuza rabochikh geologorazvedochnykh rabot (for Krikunova).

KAMINSKIY, V.S., kand.tekhn.nauk; SOKOLOVA, M.S., kand.tekhn.nauk

Centrifugal coal preparation. Nauch.trudy po obog.i brik ugl.
no.1:22-60 '58. (MIRA 12:10)

(Coal preparation--Equipment and supplies)

SOV/68-58-12-4/25

AUTHORS: Kaminskiy, V.S., and Sokolova, M.S.

TITLE: The Use of Surface Active Substances for the Intensification of the Dewatering of Flotation Concentrates
(Primeneniye poverkhnostno-aktivnykh veshchestv dlya intensifikatsii obezvozhivaniya flotokontsentrata)

PERIODICAL: Koks i Khimiya, 1958, Nr 12, pp 13-18 (USSR)

ABSTRACT: A laboratory investigation on the application of surface active substances for the intensification of dewatering of fine coals is described. 30 substances were tested, and the experimental results are shown in Figs 1 - 5. The best results (7-5.4% decrease in the water content) were obtained with additions of "mylonafra" (probably a naphthenic soap) in a proportion of 1-2g/litre of pulp (2-3kg/ton of coal). Preliminary experiments on an industrial scale were carried out on the Kal'miusk TsOF where a decrease in the moisture content of only 3.4-3.7% was obtained (Table). The lower results obtained under

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SOV/68-58-12-4/25

The Use of Surface Active Substances for the Intensification of the Dewatering of Flotation Concentrates

industrial conditions are ascribed to an insufficiently intensive mixing of the reagent with coal. The work is being continued.

There are 5 figures, 1 table and 4 references (all Soviet).

ASSOCIATION: VNIIG, Gileobogashcheniye (All-Union Scientific-Research Institute for the Beneficiation of Coal)

Card 2/2

KAMINSKIY, V.S.; KORSHUNOV, V.I.; SOKOLOVA, M.S.

Enrichment of Bureya coal by means of centrifugal separation and
by combined methods. Izv.Sib.ots. AN SSSR no.1:34-43 '59.
(MIRA 12:4)

1. Institut goryuchikh iskopayemykh AN SSSR.
(Coal preparation)

KAMINSKIY, V.S., kand. tekhn. nauk; SOKOLOVA, M.S., kand. tekhn.nauk

Bureya coal preparation by means of centrifuging. Obog. i brik.
ugl. no.9:13-25 '59. (MIRA 12:9)

(Bureya Basin--Coal preparation)
(Separators (Machines))

KAMINSKIY, V.S.; SOKOLOVA, M.S.

Centrifugal coal preparation in Eastern Siberia. Ugol' 34 no.7:
46-50 J1 '59. (MIRA 12:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut Ugleobogashcheniye.
(Siberia, Eastern--Coal preparation)

SKLOVSKAYA, A.A., otv. red.; DREMAYLO, P.G., inzh., zam. otv. red.; KAMINSKIY, V.S., kand. tekhn. nauk, zam. otv. red.; AVETISYAN, A.N., red.; BRILLIANTOV, V.V., kand. tekhn. nauk, red.; GALIGUZOV, N.S., kand. tekhn. nauk, red.; GORLOV, I.F., red.; GREBENSHCHIKOV, V.P., red.; DAVYDKOV, M.I., red.; ZVENIGORODSKIY, G.Z., red.; KARPOVA, N.N., red.; KOZKO, A.I., red.; MARUSEV, P.A., red.; PONOMAREV, I.V., red.; POPUTNIKOV, F.A., red.; SOKOLOVA, M.S., kand. tekhn. nauk, red.; TURCHENKO, V.K., red.; FILIPPOV, V.A., red.; YUSIPOV, A.A., red.; YAGODKINA, T.K., red.; MIRONOVA, T.A., red. izd-va; LOMILINA, L.N., tekhn. red.; MAKSIMOVA, V.V., tekhn. red.

[Technological trends in coal preparation] Tekhnicheskie napravleniya obogashcheniya uglei. Moskva, Gos.nauchno-tekhn. izd-vo lit-ry po gornomu delu, 1963. 120 p. (MIRA 16:10)

1. Gosudarstvennyy proyektno-konstruktorskiy i nauchno-issledovatel'skiy institut po obogashcheniyu i briketirovaniyu ugley.
 2. Gosudarstvennyy proyektno-konstruktorskiy i nauchno-issledovatel'skiy institut po obogashcheniyu i briketirovaniyu ugley (for Yagodkina, Brilliantov).
- (Coal preparation)

KAMINSKIY, V.S., kand.tekhn.nauk; SOKOLOVA, M.S., kand.tekhn.nauk;
BRUK, O.L., inzh.; KORSAK, L.L., inzh.

Study of the adsorption of calcium chloride by the products of
gravity preparation of coals using the radioisotope method.
Obog.i brik.ugl. no.30:65-70 '63. (MIRA 17:4)

KAMINSKIY, V.S.; LEYTES, S.Ya.; SOKOLOVA, M.S.

Obtaining low-ash concentrates for the electrode industry
out of "Listvienskiy" anthracites. Fiz.-tekhn. probl. pol.
iskop. no.4:137-140 '65. (MIRA 19:1)

1. Institut goryuchikh iskopayemykh, Moskva. Submitted March 5,
1965.

KAMINSKIY, V.S.; SOKOLOVA, M.S.

Preparation of Ural deposit coals. Fiz.-tekh. probl. razrab.
pol. iskop. no.5:152-159 '65. (MIRA 19:1)

1. Institut goryuchikh iskopayemykh, Moskva.

LOBANOVA, V.Ya.; SOKOLOVA, M.V.

Methodological problems in aeroclimatological evaluation of
the altitude of the lower cloud boundary. Trudy NIIAK no.1:
162-162 '57. (MIRA 11:10)

(Clouds)

LOBANOVA, V.Ya.; SOKOLOVA, M.V.

Characteristics of low clouds in the zone of atmospheric fronts.
(MIRA 11:12)

Trudy NIIAK no.5:42-50 ' 58.
(Clouds)

SOKOLOVA, M.V.

Age characteristics of inhibition of verbal reactions in children.
Trudy Inst. vys. nerv. deiat. Ser. patofiziol. 8:20-27 '61.

(MIRA 15:2)

(INHIBITION)

(CONDITIONED RESPONSE)

S/169/62/000/011/044/077
D228/D307

00000

AUTHORS: Pashkova, Z.D. and Sokolova, M.V.

TITLE: Problems of constructing and analyzing maps of extreme temperature and isobar height values

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 11, 1962, 74-75, abstract 11B413 (Tr. N.-i. in-ta aeroklimatol., no. 16, 1962, 28-32)

TEXT: Maps of maximum and minimum air-temperature values for the isobaric surfaces 850, 800, 500, 300 and 200 mb were constructed from the data of 300 points. In extreme southern districts, where there were few data, the extreme temperature values were found with regard to the average square temperature deviation (δ). It was supposed that the temperature curve distribution was normal, and that 99.7% of all cases should lie in the range $\pm 3\delta$. Then the temperature fluctuation between extremes does not exceed 6δ . Maps of the highest (the lowest) temperature were compared with those of the average temperature for summer (winter) months. Regions of ex-

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S/169/62/000/011/044/077
D228/v307

Problems of constructing ...

extreme temperature values were found to coincide with the corresponding centers of cold and warmth on the average temperature maps. Graphs of the temperature change in height were used to coordinate maps of the temperature extremes of different levels. Maps are given for minimum temperature values in the northern hemisphere at the levels 850 and 100 mb. From them it can be seen that the horizontal temperature variation decreases from the 850-mb level towards the 100-mb level. Maps of the extreme heights of isobaric surfaces are prepared in the same way as those for the extreme temperatures on the isobaric surfaces. Maps were prepared for the maximum and minimum heights of the isobaric surfaces 850, 700, 500, 300 and 200 mb. Isolines were drawn every 0.08 gp km on the 3 lower levels and every 0.16 gp km on the remainder. An analysis is made of the comparison of maps of maximum and minimum isobar heights with those of the near-ground pressure for January and July. The maps considered are a good characteristic of the general atmospheric circulation and can be applied in the practical service of aviation and in other branches of the national economy.

[Abstracter's note: Complete translation]

Card 2/2

ACCESSION NR: AT4028297

S/2667/63/000/024/0023/0053

AUTHOR: Mertsalova, O. B.; Sokolova, M. V.; Sy*cheva, Ye. F.

TITLE: Climatic characteristics of the temperature in a model of the standard atmosphere

SOURCE: Moscow. Nauchno-Issledovatel'skiy institut aeroklimatologii. Trudy*, no. 24, 1963, 23-53

TOPIC TAGS: meteorology, standard atmosphere, air temperature, climate, climatology, troposphere, stratosphere

ABSTRACT: Vertical cross-sections have been constructed for a mean meridian, as well as curves showing the distribution of temperature with height for various latitudes. The method for constructing the cross-sections and curves is described. A method is also described for computation of the temperature of the boundaries of the confidence intervals. The distribution of temperature with height on standard days is given. Standard days are classified as polar night, polar day, hot day, cold day and tropical day. The figures and tables, which are analyzed in the text, reveal much of the content and scope of the article. Figure 1 -- Annual meridional temperature cross-section; Figure 2 -- Seasonal meridional temperature cross-section; Figure 3 -- Curves of the vertical distribution of temperature by latitude

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ACCESSION NR: AT4028297

zones during the year; Figure 4 -- Curves of the vertical distribution of temperature by latitude zones during the winter; Figure 5 -- Curves of vertical distribution of temperature by latitude zones during the summer; Figure 6 -- Distribution of temperature by latitude as a function of height; Figure 7 -- Histograms of frequency of temperatures over the northern hemisphere; Figure 8 -- Determination of the temperature of boundaries of confidence intervals; Figure 9 -- Distribution of temperature of different probabilities in the tropical zone during the year; Figure 10 -- Distribution of the temperature of different probabilities in the temperate zone during the year; Figure 11 -- Distribution of the temperature of different probabilities in the polar zone during the year; Figure 12 -- Distribution of the temperature of different probabilities in the northern hemisphere during the year; Figure 13 -- Distribution of temperature with height in the polar night and polar day; Figure 14 -- Distribution of temperature with height on cold and warm days; Figure 15 -- Distribution of temperature with height over the tropics, in the middle latitudes and as a mean for the northern hemisphere. The tables supply statistical data used in constructing the figures. The characteristics of the different classes of standard days are described in detail. Orig. art. has: 1 formula, 15 figures and 3 tables.

ASSOCIATION: Nauchno-issledovatel'skiy institut aeroklimatologii, Moscow

Card

2/3

ACCESSION NR: AT4028297

(Scientific Research Institute of Climatology)

SUBMITTED: 00

DATE ACQ: 16Apr64

ENCL: 00

SUB CODE: AS

NO REF SOV: 019

OTHER: 008

Card 3/3

ACCESSION NR: AT4028298

S/2667/63/000/024/0054/0058

AUTHOR: Mertsalova, O. B.; Sokolova, M. V.

TITLE: Mean and extreme pressure values

SOURCE: Moscow. Nauchno-issledovatel'skiy institut aeroklimatologii. Trudy*, no. 24, 1963, 54-58

TOPIC TAGS: atmospheric pressure, northern hemisphere, seasonal pressure, annual pressure, standard pressure, latitude belt

ABSTRACT: The authors describe a method of calculating mean pressure distribution at altitudes for three latitude belts and for the entire northern hemisphere as well as a method of obtaining extreme pressure values. The three latitude belts are the tropic (0-30°NL), temperate (30-60°NL), and polar (60-90°NL). Processing of observations above the altitude of isobaric surfaces, according to the separate stations for obtaining the mean values by region and latitude belts, was produced by the method previously described by Z. I. Gavrilova and O. B. Mertsalova (this issue). The number of observations used for determining mean altitudes is the same as for temperature. The values of the extreme air pressure in the northern hemisphere and the mean annual air pressure is plotted in Fig. 1. The differences of seasonal

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ACCESSION NR: AT4028298

mean pressures are presented in tables for the three zones, as well as for the northern hemisphere as a whole. Orig. art. has: 3 tables and 1 figure.

ASSOCIATION: Nauchno-issledovatel'skiy institut aeroklimatologii (Scientific Research Institute of Aeroclimatology)

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ENCLOSURE: 01

ACCESSION NR: AT4028298

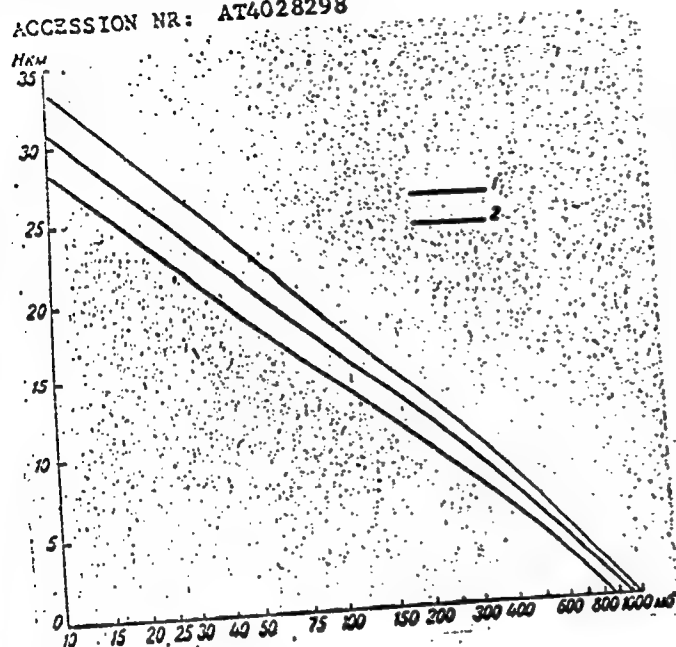


Fig. 1 Distribution of mean annual (1) and extreme (2) air pressure (MB) in the northern hemisphere

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MERTSALOVA, O.B.; SOKOLOVA, M.V.

Statistical relations between pressure at various levels in the
free atmosphere. Trudy NIIAK no.30:63-91 '65.

(MIRA 18:12)

ROGOM-DALIN, V.V.; SONILOVA, M.V.

Probability of dangerous lightning surges in insulated neutral lines of 110-220 kv. transformers. Izv. VSE : o.64:149-158 '65.

Methods for calculating the probability of dangerous lightning surges in insulated neutral lines of 110-220 kv. transformers. Ibid.:159-178 (SMEA 19:1)

L 26532-66 EWT(1)/FCC GW

ACC NR: AT5028834

SOURCE CODE: UR/2667/65/000/030/0063/0071

AUTHOR: Mertsalova, O.B.; Sokolova, M.V.

24
B+1

ORG: none

TITLE: Statistical relationships between pressure at various levels in the free atmosphere

SOURCE: Moscow, Nauchno-issledovatel'skiy institut aeroklimatologii. Trudy, no. 30, 1965. O korrelyatsionnykh zavisimostyakh temperatury i davleniya v svobodnoy atmosfere (Correlations of temperature and pressure in the free atmosphere), 63-71

TOPIC TAGS:

sounding

free atmosphere, atmospheric pressure, atmospheric

ABSTRACT: This article discusses statistical relationships and correlation between free atmosphere pressures at various altitude levels, for 19 stations of the northern hemisphere and for two seasons (winter and summer). Methods for the calculation of the pressure correlation coefficients have been described before by one of the authors, O.B. Mertsalova, in this publication, 1965, 3-17. The data used were obtained during 1957-1960 by radiosounding ascents, all exceeding the 25 km height, for the ground level and the following altitudes of the isobaric levels of 850, 700, 500, 300, 200, 100, and 50 mb. Some 30 mb and 20 mb data were also used. Computational processing and

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ACC NR: AT5028834

analysis of the data exposed definite regularities in the distribution of correlation coefficients with altitude at various latitudes, and some geographical and seasonal features. Northern and moderate latitude stations have substantial positive coefficients of correlation, with a smooth, moderate decay with increasing interlevel distance. Tropical latitude stations have smaller correlation coefficients, which show a more rapid decay with increasing interlevel distance. Thus in the South, the correlation coefficients between the surface pressure and pressure at altitude are usually passing thru zero for altitude levels of 10 km. The authors present several conclusions about the behaviour of the mean square deviation of pressure. They find, e.g. that it 1) is relatively very large at ground level 2) has larger magnitudes in the North, 3) is practically independent of altitude in the South. Evidence of the very small correlation coefficients in the South is examined in the light of possible presence of non-linear constraints. Analysis shows that the substantial stability of the gross meteorological process in the South leaves the pressure differences between levels dependent largely upon the variation of the local pressure gradients. Thus the coefficients are sensitized to the small but random variations of the pressure gradients. Orig. art. has 6 figures, 3 formulas and 3 tables.

SUB CODE: 04

SUBM DATE: 00

ORIG REF: 017

OTH REF: 001

Card 2/2 *CL*

MRACHKOVSKIY, S.K.; NAYDICH, N.L.; NESTERVOVSKAYA, Ye.M.; SAVINA, K.V.; SERGEYEVA, A.Ye.; SOKOLOVA, M.Ye.; FOMICHEVA, V.S.; CHERNYSHOVA, V.A.; SHUMILOVA, T.V.

APPROVED FOR RELEASE 08/25/2000 CIA-RDP86-00513R001652110016-8"

USSR. Zhur.mikrobiol., epid.i immun. 33 no.8:20-24, Ag '62.
(MIRA 15:10)

1. Iz Tsentral'nogo nauchno-issledovatel'skogo dezinfeksiionnogo instituta.

(FLIES--EXTERMINATION) (DDT)

SOKOLOVA, N. A.

Sokolova, N. A.- "Experience in drawing reliefs on large-scale air pictures,"
Sbornik nauch.-tekhn. i proizvod. statey metrii, Issue 22, 1948, p. 105-03.

SO: U-4110, 17 July 51, (Letopis 'Zhurnal 'nykh Statey, No. 19, 1949).

SOLOV'EV, N. A.

"A Topographic Survey to a Scale of 1:5000 by Combination and Stereophotogrammetric Methods. Transactions of the Central Scientific Research Institute of Geodesy, Aerial Survey and Cartography", No. 84, Geodezizdat, M., 1951.

SOKOLOVA, N.A.; KOS'KOV, B.N.,redaktor

~~_____~~
[Aerial photography of cities, using scales of 1:2000 and 1:5000;
brief instructions]Aerofotos'emka gorodov v masshtabakh 1:2000 i
1:5000; kratkie ukazaniia. Moskva, Gos. izd-vo ~~lit-ry~~ po stroit.
i arkhitekt. 1952. 167 p. (MLRA 10:4)
(Photography, Aerial)

СОКОЛОВ, Н. Н.

PAGE I

TRANSIT ISLAND BIBLIOGRAPHICAL REPORT

AND 416 - I

Book:

Call No.: 49627451

Author: BORCH-BRUYEVICH, N. D., Dr. of Techn. Sci., Ed.

Full Title: AERIAL PHOTOGRAPHY OF CITIES AND CITY SETTLEMENTS

Transliterated Title: Aerofotos"goroda gorodov i gorodskikh poselkov

Publishing Data:

Originating Agency: None

Publisher: House of the Ministry of Communal Economy of the USSR

Date: 1943

Pb. op.: 355

No. of copies: 5,000

Editorial Staff:

Editor: Borch-Bruyevich, N. D.

Tech. Ed.: None

Editor-in-Chief: None

Appraiser: None

Others: Separate chapters were written by: Daynko, V. F. (Introduction, Chapters II, III, VI, VII and X); Sarantsev, N. M. (Ch. I); Rudakov, I. Ye. (Ch. IV); Tolychiy, V. S. and Butler, S. A. (Ch. V and IX); Yermeyev, V. S. (Ch. VIII); Sokolova, N. A., Recipient of the Stalin Prize (Ch. XI).

Text Data:

Coverage: This is a handbook in which the processes of aerial surveying and photography are outlined, particularly their application in mapping cities and city settlements from aerial photography negatives. The main emphasis is on procedures in taking aerial photographs, processing the negatives and inter-

1. Purpose of the manual is to provide a practical guide to the

AM 116-1

processing of negatives. Equipment for making negatives (cameras, lenses and
filters) is outlined for processing negatives and developing (rectifiers, d.p.
cameras, enlargers) is outlined only very briefly without giving any detailed
information. Many tables are of practical help for those who engage in pic-
ture taking and in optical processing of negatives. However, no new or
special material could be found in this manual. Tables, diagrams.

SOKOLOVA, N. A.

"Determination of Inclination Angles From Statoscope Readings"

Sb. ref. Tsentr. n-l. In-ta geod., across'yemki i kartogr., No 1, 1954, # 32-34

Readings of the statoscope allow the determination of real longitudinal inclination angles of pictures facilitating the simplification of xcoreintation of pictures on the topographical stereometer STD-2, because an adjustment and a correction of the discrepancy of longitudinal parallaxes may be computed without preliminary orientation. A method for pinpointing errors is given. (RZhAstr, No 10, 1955)

SO; Sum-No. 787, 12 Jan 56

ИЗВЕСТИЯ АКАДЕМИИ НАУК СССР, 1954, No. 2, pp. 37-41.

"The use of Altimeter and Statoscope readings in Stereotopographic Survey on Scales of 1:25,000 and 1:10,000", Sb. Ref. Tsentr. n-i. in-ta g od., aeros'-yemki i kartogr., No. 2, pp 37-41, 1954.

Readings of radioaltimeter permit determination of the altitude of photograph and drawing of stereoscopic relief. The use of altitude differences in photography, longitudinal angles of inclination of pictures of stereometer and the detection of rough errors. Methods for computing the altitudes at which pictures were taken connected to the readings of statoscope and the order of stereocouple orientation in the stereometer are adjusted to the use of these data in the setting of the corrector. (RZhAstr. No 11, 1955)

SO: Sum 812, 6 Feb 1956

SOKOLOVA, N.A., kandidat tekhnicheskikh nauk.

Requirements of aerial survey work. Trudy TSNIIGAIK no.100:
5-11 '54. (MIRA 8:2)
(Aerial photogrammetry)

SOKOLOVA, N.A. kandidat tekhnicheskikh nauk; KRASHENINNIKOV, G.D.,
kandidat tekhnicheskikh nauk; KOZHEVNIKOV, N.P., kandidat
tekhnicheskikh nauk.

Requirements for the arrangement of points of the plane and
elevated surveying data. Trudy TSNIGAIL no.100:13-17 '54.
(Aerial photogrammetry) (MLRA 8:2)

SUDAKOV, S.G.; VIROVETS, A.M.; KURYTSIN, S.V.; PAVLOV, V.F.; PODOBEDOV, N.S.;
POPOV, V.A.; RYTOV, A.V.; SOKOLOVA, N.A.; SOKOLOV, M.N.; TROITSKIY,
B.V.; SHNEYDERMAN, E.S.

[Instructions for topographical surveying; scale 1:5000 and 1:2000]
Instruktsiia po topograficheskoi s*emke v masshtabakh 1:5000 i 1:2000.
Moskva, Izd-vo geodezicheskoi lit-ry, 1955. 87 p. [Microfilm]
(MIRA 8:2)

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye geodezii i karto-
grafii.
(Topographical surveying)

Translation from: Referativnyy Zhurnal, Geografiya, 1957, Nr 1, p.11 (USSR)

AUTHORS: Aleksandrova, Yu. Ya., Bocharova, Ye. P., Knorozova, V. N.
Leytgammel', Ye. E. Sviridov, A.Ye., Sokolova, N.A. and
Eglit, V.I.

TITLE: Experimental and Practical Work of the MOSMT (Opytno-
proizvodstvennaya rabota MOSMT)

PERIODICAL: In: Opyt stereotopogr. s"yemki, Moscow, Geodezizdat, 1956, pp. 5-15

ABSTRACT: Brief description of field location; description of aerial, field
and office work in stereotopographic surveying on a scale 1:5,000
for compiling topographic plans of coal basins.

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